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CLIMATE CHANGE

Temperature Trends in the Lower Atmosphere: Steps for Understanding and Reconciling Differences.
U.S. Climate Change Science Program, 2 May 2006
http://www.climatescience.gov/Library/sap/sap1-1/finalreport/default.htm

According to this report, there is no longer a discrepancy in the rate of global average temperature increase for the surface compared with higher levels in the atmosphere. This discrepancy had previously been used to challenge the validity of climate models used to detect and attribute the causes of observed climate change

"This synthesis and assessment report exposes the remaining differences among different observing systems and data sets related to recent changes in tropospheric and stratospheric temperature," said Chief Editor Dr. Thomas Karl, director of NOAA's National Climatic Data Center. "Discrepancies between the data sets and the models have been reduced and our understanding of observed climate changes and their causes have increased. The evidence continues to support a substantial human impact on global temperature increases. This should constitute a valuable source of information to policymakers."

CHEMICALS

Preventing Toxic Terrorism: How Some Chemical Facilities Are Removing Danger To American Communities.
Paul Aurum, Center for American Progress, April 2006
http://uspirg.org/reports/PreventingToxicTerrorism.pdf

The Department of Homeland Security and numerous security experts have warned that terrorists could turn hazardous chemical facilities into improvised weapons of mass destruction. Some of these facilities have replaced acutely hazardous chemicals with safer, readily available alternatives— making themselves less appealing terrorist targets, while also removing the ever-present danger of a serious accident. At these facilities, no failure in safety or security can send a catastrophic gas cloud into a nearby community.

Adopting safer alternatives, however, is the only certain way to prevent a catastrophic chemical release. Many chemical facilities have already taken this step thereby protecting millions of Americans. Millions more could be taken out of harm's way with a concerted national effort to convert other high-risk facilities to safer chemicals and processes.

NUCLEAR

Nuclear Power Plants: Efforts Made to Upgrade Security, but the Nuclear Regulatory Commission's Design Basis Threat Process Should Be Improved.
GAO, April 2006
http://www.gao.gov/cgi-bin/getrpt?GAO-06-388

The Nuclear Regulatory Commission (NRC) revised the Design Basis Threat (DBT) for nuclear power plants using a generally logical and well-defined process in which trained threat assessment staff made recommendations for changes based on an analysis of demonstrated terrorist capabilities. The process resulted in a DBT requiring plants to defend against a larger terrorist threat, including a larger number of attackers, a refined and expanded list of weapons, and an increase in the maximum size of a vehicle bomb. In observing three inspections and discussing the program with NRC, GAO noted potential issues in the inspections that warrant NRC's continued attention. For example, a lapse in the protection of information about the planned scenario for a mock attack GAO observed may have given the plant's security officers knowledge that allowed them to perform better than they otherwise would have. A classified version of this report provides additional details about the DBT and security at nuclear power plants.

Yucca Mountain: DOE's Planned Nuclear Waste Repository Faces Quality Assurance and Management Challenges.
Testimony before the Subcommittee on the Federal Workforce and Agency Organization, Committee on Government Reform, House of Representatives, April 2006
http://www.gao.gov/cgi-bin/getrpt?GAO-06-550T

The Department of Energy (DOE) is working to obtain a license from the Nuclear Regulatory Commission (NRC) to construct a nuclear waste repository at Yucca Mountain in Nevada. The project, which began in the 1980s, has been beset by delays. In 2004, GAO raised concerns that persistent quality assurance problems could further delay the project. Then, in 2005, DOE announced discovery of employee e-mails suggesting quality assurance problems. Quality assurance, which establishes requirements for work to be performed under controlled conditions that ensure quality, is critical to making sure the project meets standards for protecting public health and the environment. This testimony, which summarizes GAO's March 2006 report (GAO-06-313), provides information on (1) the history of the project's quality assurance problems, (2) DOE's tracking of these problems and efforts to address them since GAO's 2004 report, and (3) challenges facing DOE as it continues to address quality assurance issues within the project.

ENDANGERED SPECIES

Endangered Species: Time and Costs Required to Recover Species Are Largely Unknown.
GAO, April 2006
http://www.gao.gov/cgi-bin/getrpt?GAO-06-463R

The success of the Endangered Species Act is difficult to measure because some of the recovery plans reviewed indicated that species were not likely to be recovered for up to 50 years. Therefore, simply counting the number of extinct and recovered species periodically or over time, without considering the recovery prospects of listed species, provides limited insight into the overall success of the services' recovery programs. An alternative measure of the act's success would also consider estimates of if and when a species is likely to be recovered and the resources needed to prevent its extinction and promote its recovery.

TAXES

Greening the Tax Code: Tax Reform and the Environment.
Craig Hanson, Senior Associate, Sustainable Enterprise Program, World Resources Institute, David B. Sandalow, Brookings Environment Scholar, Foreign Policy Studies, April 2006
http://www.brook.edu/views/papers/sandalow200604wri.pdf

This policy brief examines fiscal instruments that both raise revenue and help improve environmental quality. The paper analyzes several different types of pollution taxes, considers current tax expenditures with adverse environmental impacts, discusses ways of integrating these instruments into tax reform packages and suggests directions for further research.

HEALTH

Regulation of Health, Safety, and Environmental Risks.
W. Kip Viscusi , AEI-Brookings Joint Center, April 2006
http://aei-brookings.org/admin/authorpdfs/page.php?id=1267

This paper provides a systematic review of the economic analysis of health, safety, and environmental regulations. Although the market failures that give rise to a rationale for intervention are well known, not all market failures imply that market risk levels are too great. Hazard warnings policies often can address informational failures. Some market failures may be exacerbated by government policies, particularly those embodying conservative risk assessment practices. Labor market estimates of the value of statistical life provide a useful reference point for the efficient risk tradeoffs for government regulation. Guided by restrictive legislative mandates, regulatory policies often strike a quite different balance with an inordinately high cost per life saved. The risk-risk analysis methodology enables analysts to assess the net safety implications of policy efforts.

Inadequate regulatory enforcement and behavioral responses to regulation may limit their effectiveness, while rising societal wealth will continue to generate greater levels of health and safety.

New Frontiers in Environmental Sciences and Human Health. 2006-2011 Strategic Plan.
National Institute of Environmental Health Science, May 2006
http://www.niehs.nih.gov/external/plan2006/StrategicPlan2006final.pdf

The plan, aimed at challenging and energizing the scientific community to use environmental health sciences to understand the causes of disease and to improve human health, fundamentally changes the way NIEHS approaches research. Traditionally, NIEHS has supported individual scientists whose work focused on either basic biological responses to environmental agents or environmental problems in public health. The new strategy emphasizes research focused on complex human disease, and calls for inter-disciplinary teams of scientists to investigate a broad spectrum of disease factors, including environmental agents, genetics, age, diet, and activity levels. Recent advances in technology make this emphasis on human health and new integrative approach possible

WATER

New Methods for Identifying Robust Long-Term Water Resources Management Strategies for California.
David G. Groves, Rand Corporation, April 2006
http://www.rand.org/pubs/rgs_dissertations/2006/RAND_RGSD196.pdf

Ensuring sufficient, high-quality water supplies for California over the next several decades will be a great challenge for water resource managers. Choosing an appropriate management response using standard methods will be extremely difficult and contentious because the scope and magnitude of these impacts are highly uncertain and stakeholders have diverse views about desirable outcomes. This dissertation first documents the development and use of a model to generate quantitative scenarios of future water demand in California. It next describes a new analytic method for decisionmaking under deep uncertainty called Robust Decision Making (RDM). To demonstrate how RDM can be a valuable analytic tool for California long-term water planning, the dissertation applies the methodology to a stylized representation of the water supply and demand management challenge facing Southern California.